

Chapter 1 Purpose and Need

1.1 Introduction

This environmental impact statement (EIS) evaluates the effects of a comprehensive strategy to conserve and enhance essential fish habitat (EFH) for fish managed under the *Pacific Coast Groundfish Fishery Management Plan* (groundfish FMP). The National Marine Fisheries Service (NMFS), in collaboration with the Pacific Fishery Management Council (hereafter, the Council), prepared this document. The comprehensive strategy to conserve EFH, including its identification and the implementation of measures to minimize adverse impacts to EFH from fishing, to the extent practicable, must be consistent with provisions in the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801 et. seq.) and implementing regulations. The MSA is the principal legal basis for fishery management within the Exclusive Economic Zone (EEZ), which extends from the outer boundary of the territorial sea to a distance of 200 nautical miles from shore. Implementation of the strategy may require that the groundfish FMP be amended to describe any change in the EFH identification and description, among other things. New regulations may also be required to implement impact minimization measures.

Preparation of this EIS stems from a 2000 court order in *American Oceans Campaign et. al. v. Daley et. al.*, Civil Action No. 99-982 (GK)(D.D.C. September 14, 2000) (*AOC v. Daley*), which required several Councils, including the Pacific Council, to prepare EISs to evaluate the effects of fishing on EFH and identify measures to minimize those impacts, to the extent practicable. The Council's Pacific groundfish FMP was affected by this order.

According to Section 102(2)(C) of the National Environmental Policy Act (NEPA), any “major federal action significantly affecting the quality of the human environment” must be evaluated in an EIS. The Council on Environmental Quality (CEQ) regulations (40 CFR 1502.9) require agencies to prepare and circulate a draft EIS (DEIS), which “must fulfill and satisfy to the fullest extent possible the requirements established for final statements in Section 102(2)(C) of [NEPA].” CEQ regulations, 40 CFR 1506.10(c), and NOAA Administrative Order 216-6. 5.01.b.1(i) stipulate a minimum 45-day public comment period on the DEIS. However, a joint stipulation pursuant to the aforementioned court order specified the date on which the DEIS must be published (February 11, 2005) and the end of the public comment period (May 11, 2005), thereby establishing a 90-day comment period. At the end of this period, NMFS will prepare a final EIS (FEIS) that includes responses to comments and appropriate revisions to the draft document. The stipulation requires the FEIS to be published by December 9, 2005. After the EIS is completed, a 30-day “cooling off” period ensues before the responsible official may sign a record of decision (ROD) and implement the proposed action. The stipulation requires the ROD to be signed by February 28, 2006. NMFS must approve any FMP amendment or implementing regulations by May 6, 2006.

1.2 How This Document is Organized

Environmental impact analyses have four essential components: a description of the purpose and need for the proposed action, a set of alternatives that represent different ways of accomplishing the proposed action, a description of the human environment affected by the proposed action, and an evaluation of the

predicted direct, indirect, and cumulative impacts of the alternatives.² (The human environment is interpreted comprehensively to include the natural environment and the relationship of people with that environment, 40 CFR 1508.14.) These elements allow the decision maker to look at different approaches to accomplishing a stated goal and understand the likely consequences of each choice or alternative. A public comment period allows the decision maker to also consider comments provided by the public. This EIS has ten chapters, plus appendices, covering the following topics:

- The rest of this chapter discusses why NMFS and the Council are designating EFH and considering measures to minimize the adverse impact of fishing on EFH. This description of ***purpose and need*** defines the need for, and goals and objectives of, the proposed action. The ***purpose and need*** also defines the scope of the subsequent analysis. In addition, Chapter 1 provides some background on the proposed action, the groundfish fishery management regime, and the process of developing this EIS.
- Chapter 2 provides different ***alternatives*** the Council considered to address the purpose and need. These alternatives are organized in four categories: designation of EFH, designation of habitat areas of particular concern (HAPCs), measures to minimize the adverse effects of fishing on EFH, and research and monitoring program alternatives to improve understanding of habitat function and the effects of fishing on EFH.
- Chapter 3 describes the ***affected environment***, or ***baseline*** environmental and social conditions as they exist before implementation of the proposed action.
- Chapter 4 assesses the predicted ***environmental consequences*** (including socioeconomic impacts) of the alternatives outlined in Chapter 2. This analysis compares and contrasts the alternatives and evaluates how the human environment may potentially be changed by the proposed action in comparison to the baseline conditions described in Chapter 3.
- Chapter 5 explains how these management measures are consistent with the groundfish FMP and 10 National Standards set forth in the MSA (§301(a)) and governing plans, plan amendments, and accompanying regulations.
- Chapter 6 describes how this EIS addresses relevant laws and executive orders, other than the MSA. As appropriate, it also includes additional elements and determinations required by these mandates.
- Chapters 7 and 8 provide background information on the staff who prepared this document and its distribution to other agencies and interested parties.
- Chapter 9 defines acronyms and contains the bibliography.
- Appendix A describes the comprehensive risk assessment (hereafter referred to as the Risk Assessment), which brings together data and tools to form the principal scientific basis for policy decisions on EFH identification and description and minimization.

² Federal regulations at 40 CFR 1502 detail the required contents of an EIS. Although there are several additional components, this list is of the core elements.

1.3 Purpose and Need for the Proposed Action

1.3.1 The Proposed Action

The proposed action is to ensure compliance with section 303(a)(7) of the Magnuson-Stevens Act by amending the Pacific Coast Groundfish FMP to (1) describe and identify essential fish habitat (EFH) for the fishery, (2) designate Habitat Areas of Particular Concern, (3) minimize to the extent practicable the adverse effects of fishing on EFH, and (4) identify other actions to encourage the conservation and enhancement of EFH. The project area for this action is the Pacific Coast EEZ shoreward to the inland extent of estuaries (Figure 1-1).

1.3.2 Purpose of the Proposed Action

The purpose of proposed action is: first, to provide the Council and NMFS with the information they need to better account for the function of Pacific Coast groundfish EFH when making fishery management decisions; second, to ensure that this EFH is capable of sustaining groundfish stocks at levels that support sustainable fisheries; and third, that EFH is capable of sustaining enough groundfish to function as a healthy component of the ecosystem.

1.3.3 Need

The proposed action is needed because the Council and NMFS have not had the tools to consider habitat and ecosystem function, and their relation to other biological and socioeconomic conditions affecting the groundfish fishery, in management decisionmaking. The West Coast groundfish fishery suffers from numerous challenges; although identifying and conserving EFH cannot address all these problems, the proposed action will allow managers to provide solutions in a more comprehensive way, including consideration of EFH. Among the problems facing the fishery are declining stock sizes which led the Secretary of Commerce to declare nine groundfish stocks overfished;³ and changing ocean conditions, which may have contributed to the failure of some groundfish stocks to replace themselves (recruitment failure). An overriding problem has been the challenge of managing fisheries with limited scientific data. This increases the risk that decisions exacerbate the kinds of fishery- and stock-related problems just identified.

In the Magnuson-Stevens Act, Congress found that “one of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats” and “habitat considerations should receive increased attention for the conservation and management of fishery resources of the United States.” Furthermore, one of long-term goals for the groundfish fishery, adopted by the Council in its strategic plan, is “to protect, maintain, and/or recover those habitats necessary for healthy fish populations and the productivity of those habitats” (Ad-Hoc Pacific Groundfish Fishery Strategic Plan Development Committee 2000).

Each of the key problems mentioned earlier is related to the need to sustain fully functional EFH and underscores the importance of understanding EFH and EFH conservation as part of a holistic approach to fishery management.

³ One of these stocks, Pacific whiting, has subsequently been declared rebuilt.

1.4 Objectives Satisfied By This EIS

Acting on the advice of the National Research Council’s Committee on the Ecosystem Effects of Fishing (National Research Council 2002), NMFS and the Council have engaged in a public process to develop a Comprehensive Risk Assessment (Appendix A) to determine if EFH-related problems exist, and if so, which of these problems could be appropriately considered through the Council and NEPA processes. The risk assessment focuses on the identification of EFH, threats to its health and function, and the delineation of gaps in the available data, which if filled would improve the risk assessment and support its ongoing use. Once the risk assessment was completed, the following problem statement was developed, in order to highlight the issues that this EIS is intended to resolve:

Based on the results of the risk assessment, public input received during scoping, and the legal mandate from the Magnuson-Stevens Act, the Council, NMFS, and partner organizations have developed the following objectives for this EIS:

- *consider alternatives for the designation of EFH;*
- *consider alternatives for the designation of HAPCs;*
- *consider alternatives for minimization of adverse effects of fishing on EFH; and,*
- *address gaps in available data.*

1.5 The Mandate to Identify and Conserve Essential Fish Habitat

The MSA, enacted in 1976, establishes the framework for managing fisheries in the EEZ. Broadly speaking, its provisions promote sustainable use of fishery resources. This requires maintaining healthy fish stocks, and in the case of overfished stocks, ending overfishing and rebuilding them, in order to increase long-term economic and social benefits to the nation from living marine resources. The Act also establishes a unique institutional framework through a system of eight regional fishery management Councils. The Councils, composed of representatives from state and federal agencies, tribes, and appointees representing resource users, develop policies, plans, and management measures for the fisheries occurring in each of the eight regions. FMPs developed by the Council are the primary vehicle for establishing a management framework. NMFS (as designated by the Secretary of Commerce) must approve and implement FMPs, and any amendments to them, or disapprove them.

The MSA has been amended several times, including significant amendments in 1996 by the Sustainable Fisheries Act (SFA). The SFA added habitat conservation provisions in the MSA by introducing a requirement that FMPs “describe and identify essential fish habitat..., minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat” (16 U.S.C. 1853(a)(7)). This provision also directed NMFS to develop guidelines for describing and identifying EFH. These guidelines are published in the Code of Federal Regulations at 50 CFR Part 600, Subpart J. Subpart J also addresses consideration of fishery management measures to minimize to the extent practicable adverse effects on EFH from fishing. The MSA also states “Each Federal agency shall consult with the Secretary [of Commerce] with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act” (16 U.S.C. 1855(b)(2)). In addition to the requirement that NMFS (on behalf of the Secretary) consult on federal actions affecting EFH, Councils may comment and make recommendations on such actions through NMFS. Regulations at 50 CFR Part 600, Subpart K detail this consultation process. The majority of consultations address the potential effects of various nonfishing activities that may be permitted or undertaken by other federal agencies.

Regulations at 50 CFR 600.815(a)(8) define habitat areas of particular concern (HAPCs) as a subset of EFH that should be identified in an FMP. HAPCs must meet at least one of the four criteria identified in the regulations:

- 1) The importance of the ecological function provided by the habitat.
- 2) The extent to which the habitat is sensitive to human-induced environmental degradation.
- 3) Whether, and to what extent, development activities are, or will be, stressing the habitat type.
- 4) The rarity of the habitat type.

HAPCs help to focus the consultation process, by identifying habitat areas that may be especially important or vulnerable. This helps in the allocation of scarce human and budgetary resources. When the Council identified the range of alternatives analyzed in this EIS, including several designating HAPCs, they noted that the effects of fishing on HAPCs should be considered when evaluating future management actions. This is not a specific requirement of the EFH regulations, but supports the MSA mandate to minimize the effects of fishing on EFH, to the extent practicable.

The Endangered Species Act (ESA) is also a consideration in the EFH consultation process. (Chapter 6 describes this cross-cutting mandate.) NMFS shares ESA authority with the U.S. Fish and Wildlife Service (USFWS), which has responsibility over terrestrial animals, birds, and freshwater fishes. Federal agencies must consult with NMFS (or the USFWS) pursuant to Section 7 of the ESA if an action it authorizes, funds, or carries out may affect an ESA-listed species. NMFS and USFWS may issue conservation recommendations, terms and conditions, or a list of reasonable and prudent alternatives to reduce adverse effects. Because the geographic extent of a listed species can overlap with that of MSA-managed species, EFH regulations allow for EFH consultations to be incorporated into ESA consultation.

1.6 The Current Management Framework For Pacific Coast Groundfish

The Pacific Coast groundfish fishery encompasses the management institutions and processes used to manage diverse fishery sectors, which are defined by regulations, gear type, and target species. Although not bearing directly on EFH identification and description and impact minimization, the discussion here provides the context for the implementation of any such measures. Depletion of several groundfish species, and the implementation of measures needed to recover those stocks, have resulted in a reduction in allowable groundfish landings: from 277,848 mt in 1998 to 155,646 mt in 2002, or a 44% reduction (PFMC 2004). Measures to minimize the adverse effects of fishing on EFH broadly involve reducing fishing effort or fleet capacity, regulating the use and configuration of fishing gear, or closing areas to fishing (National Research Council 2002). Although not specifically directed at EFH impacts, the Council and NMFS have already implemented measures in all three of these categories.

1.6.1 The Institutional Framework

The Pacific Council manages fisheries off the coasts of Washington, Oregon, and California. As with all the Councils, its membership is specified in the MSA. Voting members include representatives from state resource management agencies in California, Idaho (because anadromous salmon spawn in state rivers), Oregon, and Washington; NMFS; and Indian tribes with federally recognized fishing rights. In addition to these governmental representatives, the Secretary appoints eight additional voting members, chosen from nominations put forward by the four states' governors. Nonvoting members on the Council represent the USFWS, the Coast Guard, the State Department, the Pacific States Marine Fisheries Commission, and the State of Alaska.

The Council system fosters cooperation between member states, Indian tribes, and the federal government in fishery management. Management measures implemented through a federal FMP apply to vessels operating in the EEZ (50 CFR 660.301). Groundfish catch limits also apply to federal FMP-managed fish caught in state waters (50 CFR 660.302(a)). If, for instance, a vessel fishes in both state and federal waters, any fish caught count toward the limits in the federal groundfish regulations, whether the fish were caught in state or federal waters. A state can also regulate vessels registered under the laws of that state in federal waters as long as the state's laws and regulations are consistent with a federal FMP and applicable federal law. Otherwise, states retain jurisdiction in waters within three nautical miles from shore. For example, federal regulations implement closed areas in federal waters and state regulations implement closed areas in state waters.

Treaties between the United States and numerous Pacific Northwest Indian tribes reserve to these tribes the right of taking fish at usual and accustomed grounds and stations ("u & a grounds") in common with all citizens of the United States. See U.S. v. Washington, 384 F. Supp. 312, 349-350 (W.D. Wash. 1974). The National Marine Fisheries Service recognizes four tribes as having u & a grounds in the marine areas managed by the groundfish FMP: the Makah, Hoh, and Quileute Tribes, and the Quinault Indian Nation. The Makah Tribe is a party to the Treaty of Neah Bay, Jan. 31, 1855, 12 Stat. 939. See 384 F. Supp. at 349, 363. The Hoh and Quileute Tribes and the Quinault Indian Nation are successors in interest to tribes that signed the Treaty with the Quinault, et al. (Treaty of Olympia), July 1, 1855, 12 Stat. 971. See 384 F. Supp. at 349, 359 (Hoh), 371 (Quileute), 374 (Quinault). The tribes' u&a grounds do not vary by species of fish. U.S. v. Washington, 157 F. 3d 630, 645 (9th Cir. 1998).

Courts recognize two separate aspects to the tribal treaty right. First, the "geographical" aspect provides that the treaty tribes have the right to fish throughout the entirety of their usual and accustomed fishing grounds. See U.S. v. Oregon, 718 F.2d 299 (9th Cir. 1983); Muckleshoot Indian Tribe v. Hall, 698 F.Supp. 1504 (W.D. Wash. 1988); Northwest Sea Farms, Inc. v. U.S. Army Corps of Engineers, 931 F. Supp 1515 (W.D. Wash. 1996). Second, the "fair share" aspect provides that the treaty tribes have the "right to a fair share of the catch passing" through their usual and accustomed fishing grounds. U.S. v. Oregon at 303. The fair share of the fish is interpreted as up to 50 percent of the harvestable surplus of fish that pass through the tribes' u&a grounds. The courts apply the conservation necessity principle to federal actions relating to treaty rights. See Makah v. Brown, No. C85-160R/ United States v. Washington, Civil No. 9213 - Phase I, Subproceeding No. 92-1, Order on Five Motions Relating to Treaty Halibut Fishing, at 6-7, (W.D. Wash. Dec. 29, 1993); Midwater Trawlers Co-op. v. Department of Commerce, 282 F.3d 710, 718-719 (9th Cir. 2002). Under the conservation necessity principle, any regulation must be "a reasonable and necessary conservation measure" and its application to the tribes is "necessary in the interest of conservation." See Antoine v. Washington, 420 U.S. 194, 207 (1975). The concept of conservation has particular meaning when applied in the context of Indian treaty rights. See United States v. Washington, 384 F.Supp. at 342, *aff'd*, 520 F.2d at 685-686; United States v. Oregon, 718 F.2d at 305.

The treaty right was originally adjudicated with respect to salmon and steelhead. However, it is now recognized as applying to all species of fish and shellfish within the tribes' u&a grounds. U.S. v. Washington, 873 F.Supp. 1422, 1430, *aff'd* 157 F. 3d 630, 644-645 (9th Cir. 1998), *cert. denied*, 119 S.Ct. 1376; Midwater Trawlers Co-op. v. Department of Commerce, 282 F.3d 710, 717 (9th Cir. 2002) ["The term 'fish' as used in the Stevens Treaties encompassed all species of fish, without exclusion and without requiring specific proof. (citations omitted)"].

The National Marine Fisheries Service recognizes the areas set forth in 50 C.F.R. 660.324© as marine u&a grounds for groundfish for the four Washington coastal tribes. The Makah u&a grounds were adjudicated in U.S. v. Washington, 626 F.Supp. 1405, 1466 (W.D. Wash. 1985), *aff'd* 730 F.2d 1314 (9th Cir. 1984); see also Makah Indian Tribe v. Verity, 910 F.2d 555, 556 (9th Cir. 1990); Midwater Trawlers

Co-op. v. Department of Commerce, 282 F.3d 710, 718 (9th Cir. 2002). The u&a grounds of the Quileute, Hoh, and Quinault Tribes have been recognized administratively by NMFS. The u&a grounds recognized by NMFS may be revised as ordered by a federal court.

In recognition of the sovereign status and co-manager role of these Indian tribes over shared Federal and tribal fishery resources, the regulations at 50 C.F.R. 660.324(d) establish procedures that will be followed for the development of regulations regarding tribal fisheries within the u&a grounds. The regulations provide that the agency will develop regulations in consultation with the affected tribe(s) and insofar as possible, with tribal consensus.

1.6.2 Fishery Sectors

Groundfish fishery sectors are defined through a combination of cross-cutting regulatory definitions, gear types, target species, and user groups. Regulatory sectors stem from the license limitation program implemented by groundfish FMP Amendment 6, adopted in 1992. A fixed number of licenses were issued, and a specific gear endorsement (either trawl, longline, or fish pot) associated with the license is required to harvest groundfish with that gear. This established three broad regulatory sectors: limited entry trawl, limited entry fixed gear (longline or fish pot), and open access. A mix of vessels falls into the open access category, which includes vessels that may target groundfish directly or take it incidentally to fisheries for nongroundfish species. Gear types permissible in the open access fisheries are governed by federal regulations at 50 CFR 600.725 and 660.302. Vessels participating in the nongroundfish fisheries that take groundfish incidentally may hold a license for that target fishery, issued by NMFS or a state government, yet still be considered in the open access sector for the purpose of groundfish fishing. Different management measures, as described below, are applied to these three sectors. The distinction between commercial and recreational sectors—and within the recreational sector, charter (for hire) and private vessels—provides an even broader definition of fishery sectors. Finally, within these regulatory and user group categories, further subdivisions may be made based on target species, gear type, or geographic region. Specific management measures may be, in turn, applied to these subsectors. For example, the limited entry trawl sector includes vessels targeting Pacific whiting, an abundant low-value pelagic species caught with midwater trawl nets. Vessels in this whiting sector, which includes at-sea processors and shore-based boats, are managed differently from other groundfish trawl vessels. The states manage recreational fisheries, although the measures they enact are coordinated through the Council and are implemented in federal regulations by NMFS. Geographic sub-sectors, comprising recreational fisheries in each state, can be identified for the recreational sector.

1.6.3 The Harvest Management Framework

The Council has developed four FMPs, for salmon, groundfish, coastal pelagic species, and highly migratory species. The groundfish FMP was approved in 1982. The management unit includes more than 80 species. These species include over 60 species of rockfish in the family *Scorpaenidae*, seven roundfish species, 12 flatfish species, assorted sharks and skates, and a few miscellaneous bottom-dwelling marine fish species. Management of these groundfish species is based on principles outlined in the MSA, groundfish FMP, and national standard guidelines, which provide guidance on the 10 national standards in the MSA. The groundfish FMP has been amended 17 times to date. Many of the recent amendments respond to new requirements of the SFA and subsequent court-ordered remands of those amendments.

Amendment 11 incorporated a range of new SFA requirements related to setting harvest levels, determining when a stock is overfished, addressing bycatch concerns, and designating EFH. No measures to minimize adverse impacts to EFH from fishing were implemented as part of this amendment. According to the amendment document, the rationale for not adopting such measures was the lack of

information “connecting fishing gear or activities to the destruction of groundfish EFH” and on appropriate minimization measures, if the effects of fishing could be assessed (PFMC 1998, p. 18).

Although not directly related to EFH issues, the harvest management framework established by Amendment 11 and Amendment 12—for setting harvest limits, or optimum yield, determining when a stock is overfished, and procedures for rebuilding overfished stocks—has profoundly affected the management system, and West Coast groundfish fisheries, over the past five years. Abundance-based reference points were identified, relative to an estimate of “virgin” or unexploited biomass of a given stock (denoted B_0). The concept of maximum sustainable yield (MSY) is used to identify a harvest limit, the Maximum Fishing Mortality Threshold (MFMT, denoted as F_{MSY}).⁴ For a given population, and set of ecological conditions, there is a biomass that produces MSY (denoted as B_{MSY}), which is less than B_0 . (Generally, population sizes above B_{MSY} are less productive because of competition for resources.) The Council-specified proxy MSY abundance for most West Coast groundfish species is 40% of B_0 (denoted as $B_{40\%}$). Two additional harvest rate related reference points are described in the groundfish FMP: the allowable biological catch (ABC) and optimum yield (OY). The ABC, which is the maximum sustainable harvest, is calculated by applying an estimated or proxy F_{MSY} harvest rate (MFMT) to the estimated abundance of the exploitable stock. OY represents a precautionary reduction from ABC due to uncertainty or the need to rebuild stocks to B_{MSY} . The ABC and OY for a stock are translations of harvest rates into a specific quantify of fish (measured by weight) that can be harvested in a year. The OY is considered a total catch limit. This means that managers need to account for or estimate both landed catch and discards when managing harvests.

These reference points establish the framework for management. Any harvest rate that exceeds the MFMT is considered overfishing. The Council may not set an OY representing a harvest rate above this threshold. The Council has also specified a minimum stock size threshold (MSST) at 25% of B_0 (denoted as $B_{25\%}$). Once a stock falls below this threshold it is declared overfished by the Secretary. This triggers a requirement to implement a stock rebuilding plan consistent with requirements in the MSA and groundfish FMP. Stocks estimated to be above this overfishing threshold, yet below an abundance level that supports MSY, are considered to be in the “precautionary zone.” The Council has specified precautionary reductions in harvest rate for such stocks to increase abundance to $B_{40\%}$, referred to as the 40-10 adjustment.⁵ Most stocks with an estimated abundance greater than $B_{40\%}$ are managed by setting harvest to the ABC. In summary, stocks can be classified in three categories according to their status: the biomass of healthy stocks is at or above B_{MSY} , the biomass of precautionary zone stocks is between B_{MSY} and the MSST; the biomass of overfished stocks is initially below the MSST. Stocks that have been declared overfished retain that description, and are subject to rebuilding requirements, until their size has returned to B_{MSY} . Therefore, a stock’s size could be in the precautionary zone, but because it had previously dipped below the MSST, the stock would still be considered overfished.

⁴ MSY represents a theoretical maximum surplus production from a population of constant size; national standard guidelines (50 CFR 600.310(c)(1)) define it as “the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological and environmental conditions.”

⁵ The “40-10” refers to percentages of unfished biomass. As the stock declines below $B_{40\%}$, the total catch OY is reduced from the ABC until, at 10% of B_0 , the OY is set to zero. However, in practice the 40-10 adjustment only applies to stocks above $B_{25\%}$ (the MSST) because once a stock falls below this level, an adopted rebuilding plan supplants it.

1.6.4 Current Issues Affecting Groundfish Management

As noted above, eight groundfish stocks are currently declared overfished and subject to rebuilding plans.⁶ They are: bocaccio (*Sebastes levis*), cowcod (*S. levis*), canary rockfish (*S. pinninger*), darkblotched rockfish (*S. crameri*), Pacific ocean perch (*S. alutus*), widow rockfish (*S. entomelas*), yelloweye rockfish (*S. ruberimus*), and lingcod (*Ophiodon elongates*). The need to rebuild these stocks has had a major effect on the groundfish management regime. Many groundfish species co-occur, making it difficult or impossible for fishermen to completely avoid the overfished species while targeting healthy stocks. The very low OYs that have to be set for some overfished species therefore act to constrain fishing opportunity for healthy stocks. Furthermore, because the eight overfished species occur across a range of depths, geographic regions, and habitats, diverse West Coast fisheries, from large catcher-processors targeting Pacific whiting to recreational anglers up and down the coast, are subject to overfished species protection constraints. Historically, the main tool for managing commercial groundfish catches has been landing limits. In their current form these cumulative landing limits set the amount of a species or a mix of species that may be landed in a two-month period. While these limits are based on landings, or the amount of fish brought to the dock, total catch must be accounted for when determining whether there is a risk of an OY being breached. At the same time, once fishermen have reached the landing limit for a species, they have an incentive to discard fish at sea so that they may continue landing other species. These at-sea discards, or bycatch, have become a focus of management, both to better monitor the amount and institute measures to reduce it.

NMFS and the Council use a three-part strategy to meet Magnuson-Stevens Act mandates on bycatch monitoring and minimization: (1) gather data through a standardized reporting methodology on the amount and type of bycatch occurring in the fishery; (2) assess these data through bycatch models to estimate when, where, and with which gear types bycatch of varying species occurs; and (3) implement management measures through Federal fisheries regulations that minimize bycatch and bycatch mortality to the extent practicable, and that keep the total mortality of groundfish within the OYs of the various groundfish species and species groups.

NMFS uses the West Coast groundfish observer program (WCGOP) established in August 2001 and required in the FMP in Section 6.5.1.2, as its primary standardized reporting methodology for bycatch in the groundfish fisheries. The WCGOP focuses on vessels participating in the shore-delivery cumulative limit fisheries for non-whiting groundfish. Although WCGOP deploys observers on vessels of all major gear types, the program initially focused on observing trawl vessel fishing activity. As WCGOP has developed, it has expanded into more observations in the limited entry nontrawl fleet. About 75 percent of WCGOP's observer hours tend to be spent on trawl vessels, with the remaining 25 percent primarily focused on limited entry longline and pot vessels. Through 2003, NMFS's observer coverage of the limited entry fixed gear fleet focused on vessels participating in the primary sablefish fishery. Beginning in 2004, the agency began adding observer coverage to the remainder of limited entry fixed gear fishing strategies and to the open access directed groundfish fisheries. Vessels participating in the at-sea whiting fisheries (catcher-processors and motherships) have been voluntarily carrying observers since 1991, although these vessels are now required to do so under federal regulations at 50 CFR 660.314. The WCGOP and the whiting observer programs, in combination with state fish ticket and logbook programs and fisheries-independent data, are used to support groundfish bycatch assessment models. In addition to these Federal programs, the Council relies on state recreational fisheries sampling programs, which use a combination of at-sea and at-dock samplers to gather catch and discard data on the recreational fisheries.

⁶ The rebuilding plans for these eight species are found in section 4.5.4 of the FMP. Implementing regulations are at 50 CFR 660.365.

NMFS and the Council use data on bycatch and discard in models intended to estimate the amount and type of bycatch occurring in the groundfish fisheries. NMFS first introduced a groundfish fisheries total catch assessment model (known as “the bycatch model”) in late 2001 for the 2002 fishing season. As the WCGOP has evolved, so has the bycatch model. During its first year, the bycatch model focused on overfished species taken incidentally in the trawl fisheries, and was populated with data from observation experiments from the mid-1990s and prior years. By January 2003, NMFS had analyzed data from the first year of the WCGOP and the bycatch models for fishing years 2003 and 2004 were updated with WCGOP-generated data. Prior to 2004, the bycatch model had focused on co-occurrence ratios for overfished species taken in target species fisheries without also looking at potential discard of target species. For the 2004 fishing year, NMFS expanded the bycatch model to set discard rates for target species by depth. Like initial WCGOP efforts, the models for the 2002-2003 fishing years also focused on the trawl fisheries. For 2005-2006, NMFS has again updated the trawl bycatch model with trawl fisheries data from WCGOP. NMFS has also revised the new fixed gear bycatch model, initially used in 2004, for the 2005-2006 fisheries that uses observer data from the limited entry fixed gear fisheries.

The third part of the NMFS and Council bycatch reduction strategy is a series of management programs intended to either directly control fishing activities or to create incentives for bycatch reduction. NMFS has implemented a wide array of fishery management measures intended to minimize bycatch and bycatch mortality over the past several years. The agency has supported a series of state-sponsored exempted fishing permit (EFP) programs to test bycatch-reducing gear types, full retention programs, and area closures. Working with the states and the Council, NMFS has also implemented shorter-than-year-round fishing seasons for various species and sectors of the groundfish fleet to protect overfished groundfish species. NMFS and the Council have also reduced overcapacity in the fleets, ultimately reducing the number of vessels on the water. Amendment 14 to the FMP implemented a permit stacking program for the limited entry fixed gear fleet that reduced the number of vessels participating in the primary sablefish fishery by about 40 percent. In late 2003, NMFS implemented a buyback of limited entry trawl vessels and their permits, reducing the groundfish trawl fleet by about 35 percent. Since 2000, NMFS has required gear modifications that restrict the use of trawl gear in rockier habitat coastwide, and that constrain the catching capacity of recreational fishing gear off California. Higher groundfish landings limits have been made available for trawl vessels using gear or operating in areas where overfished species are less likely to be taken. Species-to-species landings limit ratios have been thoroughly examined in the bycatch model mentioned earlier, and are re-examined each year as new observer program data become available. And, NMFS has implemented a suite of areas that are closed to specific types of fishing known collectively as the Groundfish Conservation Areas, in which different types of groundfish fishing activities are prohibited.

1.6.5 The Harvest Specification Process

In accordance with the groundfish FMP, since 1990 the Council has annually set Pacific Coast groundfish harvest specifications (acceptable and sustainable harvest amounts) and management measures designed to achieve those harvest specifications, with harvest specifications and management measures in effect for the calendar year January 1 to December 31. A shift to a biennial management cycle, as implemented by groundfish FMP Amendment 17, takes effect in 2005–2006. Thus, 2004 was the last year under the annual process. Under the biennial management cycle, harvest specifications and management measures are established for the two-year period in advance of the biennium. Separate ABCs and OYs are established for each calendar year in the two-year cycle. Council decisionmaking for this action occurs over three meetings, culminating in June of the year preceding the biennium. In addition to allowing more careful consideration of management proposals, this process addresses an issue raised by the court ruling in *Natural Resources Defense Council (NRDC) v. Evans*, 2001 168 F. Supp. 2d 1149 (N.D. Cal. 2001). The court found that NMFS was not allowing sufficient time for public notice and comment on

the regulations before they were implemented at the beginning of a new year. The biennial process allows more time to complete full notice-and-comment rulemaking before the January 1 start date.

1.7 The Development of This EIS

The preceding description establishes the management context within which the EFH-related measures evaluated in this EIS should be considered. The development of this EIS covers roughly the same period cited at the beginning of Section 1.6: in 1999, a coalition of environmental groups challenged the Secretarial approval of the EFH FMP amendments prepared by the Gulf of Mexico, Caribbean, New England, North Pacific, and Pacific Fishery Management Councils in *AOC v. Daley*. The court found that the agency's decisions on the EFH amendments were in accordance with the MSA, but held that the environmental assessments (EAs) on the amendments were in violation of NEPA and ordered NMFS to complete new and more thorough NEPA analyses for each of these EFH amendments.

NMFS entered into a joint stipulation with the plaintiff organizations, which called for each affected Council to complete EISs to consider actions to minimize adverse effects of fishing on EFH, to the extent practicable (*AOC v. Evans*, Civil No. 99-982 (GK)(D.D.C. December 5, 2001)). However, because the court did not limit its criticism of the EAs to efforts to minimize fishing effects on EFH, NMFS decided that the scope of the EISs should include all the EFH-related actions described in Section 1.2. EIS development has proceeded in three phases, as described in the following sections.

1.7.1 Initial Scoping

According to the NEPA, the public and other agencies must be involved in the decisionmaking process for agency actions. "Scoping" is an important part of this process. Scoping is designed to provide interested citizens, government officials, and tribes an opportunity to help define the range of issues and alternatives that should be evaluated in the EIS. NEPA regulations stress that agencies should provide public notice of NEPA-related proceedings and hold public hearings whenever appropriate during EIS development (40 CFR 1506.6).

The scoping process is designed to ensure all significant issues are properly identified and fully addressed during the course of the EIS process. The main objectives of the scoping process are to provide stakeholders with a basic understanding of the proposed action; explain where to find additional information about the project; provide a framework for the public to ask questions, raise concerns, identify issues, and recommend options other than those being considered by the agency conducting the scoping; and ensure those concerns are included within the scope of the EIS.

NMFS published a Notice of Intent (NOI) to prepare an EIS on April 10, 2001 (66 FR 18586), announcing public scoping meetings during May and June 2001 in Seattle, Washington; Newport and Astoria, Oregon; and Eureka, Los Alamitos, and Burlingame, California. According to the NOI, the EIS would evaluate the groundfish FMP from a broad, programmatic perspective, presenting "an overall picture of the environmental effects of fishing as conducted under Pacific Coast Groundfish FMP." However, as a result of this initial public scoping, NMFS decided the process would be improved if the programmatic evaluation of the groundfish FMP were shifted from an EIS more narrowly focused on EFH issues (67 FR 5962).⁷

⁷ The scope of the programmatic EIS was subsequently narrowed to focus on bycatch minimization. The FEIS for this action was published in September 2004 (NMFS 2004).

1.7.2 Development of the Decisionmaking Framework

At a March 2002 workshop NMFS habitat scientists agreed on a rough decisionmaking framework, which was presented to the Council as a “road map” for the EIS at their April 2002 meeting in Portland, Oregon. Since the development of Amendment 11, which had initially identified and described groundfish EFH, much more data had become available. For example, the 1998 designation was based primarily on catch records and a literature review of species’ habitat associations; but newly available data on physical and biological substrate types, which play key ecological roles in groundfish habitat function, would allow more detailed analysis and interpretation.

The decisionmaking framework is designed so that the best available science is interpreted for policy makers before they develop alternatives for the EIS. Scientific information is consolidated and interpreted through a comprehensive risk assessment. As a result, policy discussions can benefit from the best available science. Figure 1-2 shows the overall scheme of the decisionmaking framework, including the comprehensive risk assessment. Data relating to habitat, habitat use, fishing and non-fishing impacts to habitat, and current protection measures were consolidated in a geographic information system (GIS), a database containing geo-referenced attribute data that can be analyzed and mapped. A separate habitat use database was constructed, bringing together information on groundfish in the scientific literature in a framework that allows information to be queried and sorted. These data are used in two GIS-based models related to the major actions evaluated in this EIS: EFH identification and description, HAPC designation, and impact minimization. (As discussed below, the impacts model could not be fully used in policy development due to data limitations.)

The Council modeled development of the comprehensive risk assessment on the relationship between stock-assessments, which provide the basis for setting harvest levels, and the use of that scientific information for policy decisions. The Council in turn, uses scientific information to make social choices, within a legal framework, relating to risk and the allocation of potential costs and benefits. Similarly, the EFH decisionmaking framework separates the scientific endeavor from policymaking. Development of the comprehensive risk assessment shares two other features of the stock assessment process. First, results were vetted through a process of scientific peer review. Second, it was an open process, which allowed the public to follow and comment on its development.

After the Council approved the decisionmaking framework in April 2002, NMFS began organizing the necessary technical infrastructure, including contracting agency personnel and outside experts and consolidating data, which continued throughout implementation of the comprehensive risk assessment. In order to guide the technical team developing the risk assessment, at their November 2002 meeting the Council established the Ad Hoc Groundfish Habitat Technical Review Committee (Habitat TRC), composed of experts on groundfish biology and ecology, marine geologists, fishermen, and environmental advocates. The Habitat TRC met three times to provide guidance on risk assessment development: a February 19–20, 2003, meeting in Seattle, Washington; an August 4, 2003, teleconference (with public listening posts in Seattle, Washington; Gladstone and Newport, Oregon; and, Santa Cruz, California); and a November, 20–21, 2003, meeting Santa Cruz, California. The Habitat TRC also met December 7–8, 2004, in Portland, Oregon, to conduct a technical review of the alternatives developed by the Council for inclusion in this EIS, which was a requirement of the joint stipulation in *AOC v. Daley*.

As the comprehensive risk assessment neared completion in early 2004, the Council’s Scientific and Statistical Committee (SSC) reviewed its components and provided recommendations to the Council on its use by the Council for developing the alternatives evaluated in this EIS. Along with the guidance provided by the Habitat TRC, this comprised the scientific peer review mentioned previously. Based on an initial review by their Groundfish Subcommittee, the SSC advised the Council that the EFH

identification and description component could be used for developing EIS alternatives. The Council ratified this recommendation at their April 2004 meeting.

Having explored all available data sources and considered various approaches, the technical team developing the risk assessment narrowed the impacts component to focus on the limited entry trawl sector. This is the only sector where sufficient spatial data are available, through logbook reporting, to model fishing impacts. (The scarcity of geo-referenced data on non-fishing impacts prevented their inclusion in the model as well.) The SSC Groundfish Subcommittee met again in May 2004 to review this component and concluded with a qualified endorsement. Based on their report, the SSC advised to the Council to use some elements of this model while recommending that more work be done on other elements before use in decisionmaking. Because of constraints on time and resources, further development of the model could not be completed before the Council began considering the range of alternatives to be evaluated in this EIS. Therefore, at their June 2004 meeting, the Council directed that only those elements approved by the SSC be used to formulate fishing impact minimization alternatives in this EIS.

1.7.3 Production of the DEIS

In addition to partially approving the fishing impacts component of the risk assessment at their June 2004 meeting, the Council asked its Ad Hoc EFH EIS Oversight Committee to meet and develop a preliminary range of alternatives. Membership of the Committee includes the Washington, Oregon, and California state representatives on the Council, fishermen, and environmental advocates. Work by the Committee represented the initiation of the policy phase shown in Figure 1-2. The Committee held a three-day meeting in August 2004 and developed the preliminary range of alternatives. These alternatives were considered by the Council at their September 2004 meeting and adopted with some modifications. At their next meeting, in November 2004, the Council further refined the range of alternatives and identified their preliminary preferred alternatives.

In addition to the initial public scoping period described above in Section 1.7.1, these Council meetings allow for public participation and comment during Council, subcommittee, and advisory body meetings. The advisory bodies involved in groundfish management include the Groundfish Management Team (GMT), with representation from state, federal, and tribal fishery scientists; and the Groundfish Advisory Subpanel (GAP), whose members are drawn from the commercial, tribal, and recreational fisheries, fish processors, and environmental advocacy organizations. These committees and others, such as the Habitat Committee (HC), provided comment and advice on the range of alternatives to be included in the EIS and which should be chosen as preferred by the Council.